SVKM'S NMIMS

Shobhaben Pratapbhai Patel / School of Pharmacy & Technology Management

Programme: B. Pharm / B. Pharm + MBA **Year:** III **Semester:** V
Academic Year: 2019-20 **Marks:** 75
Subject: Medicinal Chemistry II – Theory **Time:** 10.00 am to 1.00 pm
Duration: 3 hrs.
Date: 18 November 2019 **No. of Pages :** 04

FINAL EXAMINATION

Instructions: Candidates should read carefully the instructions printed on the question paper and on the cover of the Answer Book, which is provided for their use.

1) Question No. **I** is compulsory.
2) Solve **ANY TWO** questions from Question No. II
3) Solve **ANY FIVE** questions from Question No. III
4) Draw chemical structures wherever necessary.
5) **Answer to each new question to be started on a fresh page.**
6) **Figures in brackets on the right hand side indicate full marks.**

Q I. Choose the correct option. (Attempt all questions : 1 M each) **20M**

1. Choose correct chemical name for histamine. **(1M)**

A) β-imidazole methane | B) β-imidazolyl ethylamine | C) β-imidazolyl amine | D) β-imidyl methylamine

2. One of the following in phenothiazine analogue. **(1M)**

A) Pheniramine | B) Buclizine | C) Cyclizine | D) Promethazine

3. Antihistaminics acts on H1 receptors as..... **(1M)**

A) Reversible competitive antagonists | B) Reversible non-competitive agonist | C) Reversible competitive agonist | D) None of the above

4. One of the following drug is the example of antisecretory agent (H2 antagonists) . **(1M)**

A) Azathioprine | B) Nicardipine | C) Nimodipine | D) Ranitidine

5. Bone marrow toxicity is one of the prominent adverse effect of ..... **(1M)**

A) Antihistaminic agents. | B) Antithrombotic agents. | C) Antineoplastic agents. | D) Antifertility agents.

6. The folic acid antagonists inhibit one of the following enzyme. **(1M)**

A) Hydrofolate B) synthase | B) Pentahydrofolate reductase | C) Trihydrofolate reductase | D) Dihydrofolate reductase

7. One of the following plant product used as mitotic inhibitor (as anticancer). **(1M)**

A) Vincristine | B) Vinsisteine | C) Vinistine | D) Blastovine

8. **One of the following drug undergoes enzymatic denitration in smooth muscles cells with release of nitric oxide.** (1M)

A) Nitrobenzyl sulphate B) Nifedipine C) Nitroglycerin D) Nimodipine

9. **The drug.....acts as calcium channel blocker** (1M)

A)Triamterene B) Dipyridamol C)Verapamil D)Bumetanide

10. **"The diuretic effect with inhibition of carbonic anhydrase enzyme" is the mode of action of one of the following drug.** (1M)

A)Methazolamide B) Chlorthiazide C)Hydrochlorthiazie D)Bumetenide

11. **The drug showing adrenergic neuron blocker activity is.....** (1M)

A)Enalapril B) Guanethidine C)Timolol D)Captopril

12. **The major.....drugs introduced in medicine involves antimalarial, anticonvulsants or local anesthetic properties.** (1M)

A) Antimetabolite B) Diuretics C) Vasodilator D) Anti-arrhythmic

13. **The example of fibric acid derivative is.....** (1M)

A)Pravastatin B)Cholestyramine C)Simvastatin D) Clofibrate

14. **The blood clotting factors remain biologically inactive in absence of .....** (1M)

A) Vitamin A B) Vitamin D C) Vitamin K D) Vitamin C

15. **The biologically active forms of vitamin-K dependent clotting factor includes .....** (1M)

A) factor VII, IX and X B) factor VII, IX and XI C) factor VII, IX and XII D) factor V, IX and XIII

16. **One of the following drug shows first endothelin receptor antagonist activity.** (1M)

A) Bosentan B)Clopidrogrel C)Anisindione D) Digoxin

17. **The drug .....shows phosphodiesterase inhibitor activity.** (1M)

A)Lignocaine B)Chlorpropamide C)Digoxin D)Sildenafil

18. One of the following drug is the antidiabetic agents from sulfonyl urea class. (1M)

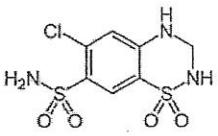
A)Pioglitazone B)Acrabose C)Metformin D) Glipizide

19. **The local anesthetic drug from Amino benzoic acid derivative is.....** (1M)

A)Lignocaine B)Mepivacaine C) Benzocaine D)Prilocaine

20. **Identify one of the chemical structure of osmotic diuretic drug.** **(1M)**

A)



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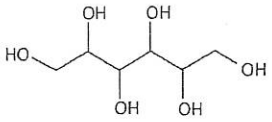

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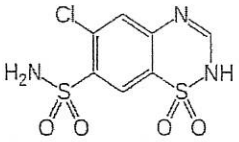

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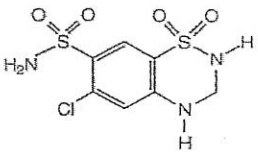


QII. Answer the following questions: (Any TWO) **10 M x 2 = 20M**

A. What are local anesthetics? Write chemical classification for Local anesthetics with examples. **(10 M)**

Describe SAR for local anesthetic agents along with suitable examples.

B. What are Diuretics? Explain structure activity relationship (SAR) for Thiazide diuretics with suitable examples. **(10 M)**

Explain in short mechanism of action of loop diuretics with suitable examples and therapeutic indications.

C. What are Antihistaminics? Describe structure activity relationship (SAR) for development of H1 antagonists with suitable examples. **(10 M)**

Write mechanism of action and therapeutic uses of H2-Antagonists with examples.

QIII. Answer the following questions: (Any SEVEN) **7 x 5 = 35 M** **35 M**

A. Classify vasodilator agents used in Antianginal treatment. Draw any two chemical structures of drugs from vasodilator category. **(5M)**

B. What is the mode of action of antiarrhythemic agents? Mention therapeutic uses and adverse effects of any two drugs used as anti-arrhythemic agent. **(5M)**

C. Explain the role of Biguanides and sulfonyl urea class of antidiabetic agents. Draw any two chemical structures of antidiabetic drugs. **(5M)**

D. Enlist various lipid disorders where anti-hyperlipidemic agents are use. Write mechanism of action of any one anti-hyperlipidemic agent. **(5M)**

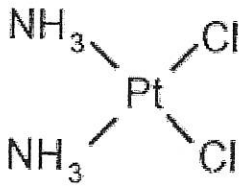
E. What is erectile dysfunction(ED)? Write mechanism of action of drugs used in ED with two examples of drugs. (5M)

F. Write a note on stereo-chemical aspects and nomenclature of Steroids with examples. (5M)

G. **Identify the drug and write its therapeutic category. (1x5=5M)** (5M)

1)

2)



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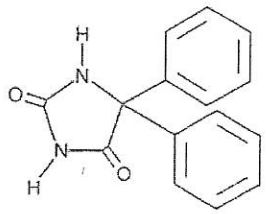

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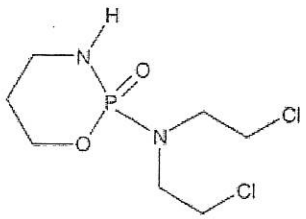

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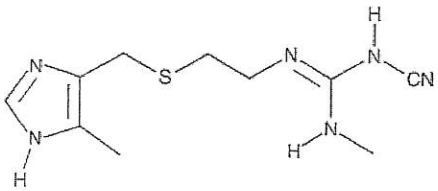

H. **Write one Therapeutic indication and one adverse effects of following drugs(1x5=5M)** (5M)

1. Chlorpropamide
2. Procaine
3. Progesterone
4. L-thyroxine
5. Hydrochlorthiazide

I. **Write chemical synthesis scheme (with chemical structures) for following drugs: (2.5x2=5M) <u>(Any TWO)</u>** (5M)

1. Disopyramide phosphate
2. Acetazolamide
3. Nitroglycerine
4. Warfarin
5. Benzocaine